

A Work Project, presented as part of the
requirements for the Award of a Master
Degree in Management from the NOVA
– School of Business and Economics



Put it in your pipe and smoke it

The Volkswagen Emissions Scandal. A management-based failure?

Organisational culture in the shadow of dark leadership

Written Master Thesis

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Semester: Fall 2018

Submission date: 04.01.2019

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Degree: International Management (M.Sc.)

Semester: 3.

Abstract

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This dissertation aims to discuss how leadership contributed to the Volkswagen Emissions Scandal. By clustering the sequence of events in the run-up to the revelation, key events and key figures are identified. Based on extracted information, which are applied to the competing-values model, VW's organisational culture is defined. While examining the impact of engineering and business-related leadership, a link between culture, performance-based pay and trans-hierarchical collaborative cheating is established. Moreover, a causal chain and an open-systems model, aggregate the findings gained. Finally, the implications part evaluates risks and provide recommendations, before limitations and opportunities for future research are discussed. Keywords: *dark leadership, organisational culture, competing-values model, collaborative cheating*

Acknowledgements

I would like to take this opportunity to thank my supervisor Professor Milton de Sousa for accepting my initial idea and leading me into the right direction, as well as for his knowledgeable support throughout the whole development of this dissertation. Moreover, I would like to deeply thank my parents for making all this possible.

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EPA – Environmental Protection Agency

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1. Introduction

"I am shocked by the events of the past few days. Above all, I am stunned that misconduct on such a scale was possible in the Volkswagen Group. I accept responsibility for the irregularities ... even though I am not aware of any wrong doing on my part."

Statement by Prof. Dr. Martin Winterkorn (Winterkorn, 2015).

On the 23rd of September 2015, when Martin Winterkorn announced his resignation, three days after VW admitted deception, it all seemed like just a few employees had been involved in what turned out to be one of the biggest corporate scandals in history (Töpfer and Duchmann, 2016). More than three years after, investigations are still not closed while new details are about to be unveiled. Explanations in terms of corporate unethical conduct usually refer to leadership. In this context Martin Winterkorn was accused of having contributed to the Emissions Scandal through a "management style ... that fostered a climate of fear" (Cremer and Bergin, 2015) while the German *Managermagazin* referred to VW's "messed-up culture" (Freitag, 2015, p.32) and former FIAT CEO Sergio Marchionne criticised a concentration of decisions within the top management. This inevitably leads to the question of responsibility in terms of leadership.

In 1963, Stanley Milgram, one of the most important figures in social psychology, showed that authority figures can contribute to unethical conduct through simple statements. Besides, statements, which leaders use to motivate as well as to articulate goals other indicators such as competition and incentives contribute to unethical behaviour (Antonakis, et. al., 2012; Lazear, 2012). Especially, win-loss industries, in which a loss for the one side produces a win for the other side, are characterised by strong competition and show unethical conduct. Examples for this type of industry are the automotive industry, which is competing for market share, sports which suffer from doping or financial markets which deal with manipulations such as Toshiba's accounting scandal (D'Adda, et. al., 2017). Both, competition as well as incentives

are inherent to VW's organizational culture. But what was first? Leadership or culture? How did leadership shape culture, which contributed to competition, and thus caused collaborative cheating? Or in short, did Martin Winterkorn and Ferdinand Piëch foster cheating and deception within Volkswagen? This paper aims to illustrate a causal chain of leadership, culture and unethical conduct by applying grounded theory, the open-system approach as well as the competing values model (Glaser and Strauss, 1967; Quinn and Rohrbaugh, 1983; Cummings and Worley, 2015) .

2. State of research and relevance

The relationships between leadership, unethical conduct and failure are complex and difficult to examine (Yammarino and Dansereau, 2002, 2008). Although, ethical conduct is seen as a product of leadership, there is almost no evidence for causality, due to several reasons (Brown and Trevino, 2006). First, it is difficult to identify unethical behaviour, since leaders or followers obviously aim to hide it (D'Adda, et. al., 2017). Second, many companies are not open to research before failure and especially not during crisis such as the Volkswagen Emissions Scandal. Therefore, most of the work is retrospective. Third, post crisis bias, organisational scapegoating as well as constrained information flows complicate retrospective research (Fischbacher-Smith, 2016). Due to non-random selection, establishing causality is even problematic when relations between the conduct of leaders and followers can be identified. Additionally, the question of what was first, leadership or culture must be examined (D'Adda, et. al., 2017).

Studies showed, that certain ethical characteristics of leaders are correlated to ethical conduct of followers (e.g., the Ethical Leadership Scale; Brown, et. al., 2005). Nevertheless, both, characteristics and conduct are subjective. Therefore, such correlations must be interpreted cautiously. In addition, experiments such as the Milgram experiment showed, that

the power and authority of superiors themselves, make people act without conscience, relatively regardless their personal traits (Milgram, 1963). Cases such as the Enron scandal set out that the marginal costs of gradually getting into unethical conduct are low. Hence, also characters that were once considered intelligent, diligent and caring are exposed to the risk of unethical conduct as described by Clayton Christensen, who referred to Jeffrey Skilling, the former CEO of Enron (Christensen, C.M., Allworth, J., and Dillon, K., 2012). Other studies measured objective indicators such as excess costs and employee exit to establish more reliable correlations (Detert, et al., 2007; Burks and Krupka, 2012; D’Adda, et. al., 2017).

Moreover, the focus of literature still lies on positive or ethical leadership and its potential positive impact (Kellerman, 2004; Tourish, 2013). The dark sides of leadership has been disregarded for a long time and is still poorly researched. By now, many different terms such as toxic leadership (Pelletier, 2010), unethical leadership (Brown and Mitchell, 2010), abusive leadership (Johnson, Venus, Lanaj, Mao and Chang, 2012) and destructive leadership (Krasikova, Green and Le Breton, 2013) exist. The main distinction refers to an abusive or a rather destructive character. While abusive leadership is characterised by manners towards subordinates such as humiliation, intimidation, belittling and non-verbal aggression (Aryee et al., 2007), destructive leaders primarily affect the organization itself (Aasland, Skogstad, Notelaers, Birkeland and Einarsen, 2010). Nevertheless, both are causally linked. Yet, there is no uniform concept of dark leadership (Furtner, Maran and Rauthmann, 2017). Previous research on the dark side mainly covers the dark triad of Machiavellianism, narcissism and psychopathy (Padilla, Hogan and Kaiser, 2007; Babiak and Hare, 2007). Taken into consideration that leaders can influence a company’s culture, enhance capabilities and lead into the right strategic direction it is a logical conclusion that leadership may also work contrary (Turner, 1994; Fischbacher-Smith, 2016). Therefore, analysing the dark side, which will be conducted throughout this paper, is imperative to improve leadership recommendations.

The VW Emissions Scandal was considered a relevant example due to the scale and methods of deception (Amour, 2016). Just a glance into the media does reveal problems concerning organisational leadership, which are causally linked to the incubation of a crisis. Moreover, the VW Emissions Scandal is also a current example to discuss these topics (Fischbacher-Smith, 2016). Finally, the media coverage also provides indications of collaboration. The positive outcomes of collaboration are well researched but there is little evidence of negative outcomes such as unethical conduct on a collective level (Trevino, Weaver and Reynolds, 2006). In this context, the VW Emissions Scandal is a unique opportunity due to the involvement of employees from a wide range of hierarchical levels and departments (Cortina, Aguinis and Deshon, 2017).

3. Methodology

This paper is based on qualitative research methods and initially aims to identify key events, key figures as well as other relevant factors within the VW Emissions Scandal. The open-systems approach and the competing-values model, which will be discussed hereinafter, help to examine how cheating emerged as a result of leadership. The open-systems approach is a popular framework in organisational research and diagnosis based on the idea of inputs such as materials or work force that lead to outputs such as services, goods or ideas. Beforehand, inputs are affected by transformation processes such as technological and social components. How well outputs match given needs is reflected by certain factors that function as feedback such as demand or remuneration. In the end, this can lead to changes within the system. In the case of the VW Emissions Scandal, the approach is used to illustrate the environment within and factors through which the scandal emerged, and which promoted unethical conduct (Cummings and Worley, 2015). Grounded theory was applied to gain a theory for the research question and to develop a causal model by making generalisations, which reflect the key aspects

of the data used (Glaser and Strauss, 1967). Information was extracted from interviews, press outlets, legal documents, technical reports, investigative reports, case studies, surveys and relevant literature. Sources were considered relevant if they provided information about inner processes at VW, characteristics of key figures, employees, the organisational culture and other relevant factors as well as theoretical approaches to leadership, culture and unethical behaviour. Since more data was collected than needed, surplus was used for comparison as well as to challenge views and approaches to finally increase the credibility of the data applied. Subjective data was treated as such but helped as a source of inspiration to gain new perspectives. Moreover, suitability of data was ensured by verifying its sources. Finally, clusters were developed by assigning data to certain themes (Castille and Fultz, 2018)

It shall be mentioned that the pure scientific as well as legal reconditioning is an ongoing process, which may produce more evidence. Therefore, this paper refers to the state of knowledge of December 2018.

4. A scandal takes its course

While analysing the collected data it turned out that the VW Emissions Scandal was not the result of one event or one decision but an ongoing effort with many decisions involved. Multiple employees, from various hierarchical levels as well as departments had been involved but why? (Castille and Fultz, 2018).

4.1 The establishment: environmental, technological and economic factors

The actual foundations for the VW Emissions Scandal were laid in the mid-2000s when Martin Winterkorn announced his goal of becoming the world's largest car manufacturer. In this time the car industry faced serious challenges. High gasoline prices, mileage standards and emissions regulations, increased the need for clean and fuel-efficient vehicles. Moreover,

vehicles had to maintain high performance. This was especially important in the U.S., which VW considered a key market to reach its goals. While Toyota aimed to meet these requirements with Hybrid-Technology, VW focused on diesel engines, which were cheaper and more powerful (U.S. Department of Energy Alternative Fuels Data Center, 2016). Additionally, VW identified a high potential for diesel due to low market shares of 5% (Boston, 2015). Unfortunately, diesel engines were also emitting toxic nitrogen oxide above U.S. emissions standards. This questioned VW's goal of becoming the world's largest car manufacturer. Therefore, a solution had to be found. In 2005 Wolfgang Bernhard, the former CEO of the Volkswagen brand for the Volkswagen AG, who oversaw diesel cars, decided not to develop an own solution but to buy Daimler's technology BlueTec. This technology came with an additional tank, to neutralise nitrogen oxide through urea injections (Lynch, Cutro and Bird, 2017). A tank did not only take space but also came with costs of \$350 as well as maintenance intervals. As a diesel pioneer, VW's engineers neither liked the idea of adapting competitor's technology, nor trusted the technology's mass market potential (Ewing, 2017). Especially, Ferdinand Piëch, chairman of the supervisory board was suspicious, since he feared Daimler to take over Volkswagen. The only alternative to BlueTec was a catalytic converter named Lean NOx Trap. This solution was less expensive than BlueTec and did not need maintenance but another system to recycle exhaust gas. Moreover, filters did not last for long. This was not only a problem in terms of customer friendliness but also in terms of the standards of the Environmental Protection Agency (EPA). In 2007, VW found itself in a difficult situation in the U.S. The diesel engine was still considered a good strategy to set apart from competitors like Toyota, but VW struggled to find a solution to meet U.S. regulations. Furthermore, the production of the new engine had already fallen behind due to a general change of the fuel injection system. Therefore, the launch date of the new engine had to be pushed back, while only two years remained to design a completely new motor (Ewing, 2017).

4.2 Under pressure

In 2007 Martin Winterkorn became the chief executive at VW. This was the end of perestroika and the introduction of a rigid top-down style management to VW. Winterkorn had started his career at Bosch and Audi and was considered a good friend of Ferdinand Piëch. In contrast to his predecessor Bernd Pischetsrieder, who had aimed to loosen Piëch's top-down style management legacy, Winterkorn was choleric and feared by many employees. This was the environment for VW's engineers while they tried to design a new diesel motor. In mid-2006 engineers realized that new problems with the particle filter would prevent the engine from getting certified by the EPA. Furthermore, they were not able to find a solution "within the allocated time frame and budget" (Göhmann Rechtsanwälte, 2016, p. 46). Nevertheless, they had several alternatives to choose from. Free replacements for filters or a better emissions technology. While replacements would have decreased customer friendliness, new technology came with higher costs. Hence, Volkswagen adapted software from Audi, which Audi had already used for its VW common rail engines. As the engineers studied the software, they found a so called 'noise function' or 'acoustic function'. This line of code within the software enabled cars to recognise test environments and to change emissions accordingly. Eventually, someone at VW must have mentioned that this software could be used to work around the EPA emissions regulations. In November 2006, an engineer responsible for the software was asked to adapt the 'acoustic function' to VW engines (U.S. District Court, 2016). The same month a meeting of about 15 people took place in VW's R&D conference room. The people within the room were aware of the software's illegality in daily use. However, Rudolf Krebs, head of motor development at VW, decided to implement the software to VW engines (R/C, 2016; Ewing, 2017).

4.3 Implementation, adjustment, concealment

In terms of implementations, VW worked together with Bosch, which developed engine control units for VW. Consequently, VW engineers forwarded specifications about the defeat device to Bosch (U.S. District Court, 2016). Bosch warned VW about illegality and asked for indemnification against legal consequences. The specifications would mean “yet another path toward potential input of data as a ‘defeat device’” (Oberlandesgericht Braunschweig, 2017, p. 10). After the defeat device was authorized by Richard Dorenkamp, Head of VW’s Engine Development After-Treatment Department and Jens Hadler, Head of Diesel Engine Development for VW in 2007, Dorenkamp presented their new results to the EPA and California Air Resources Board to gain a marketing permission but concealed information about the defeat device (United States District Court, Eastern District of Michigan Southern Division, 2017). Afterwards Dorenkamp and Hadler met to discuss further proceedings. Dorenkamp suggested to continue with the defeat device and Hadler authorized it (United States District Court, Eastern District of Michigan Southern Division, 2017). In 2011 Bernd Gottweis, VW AG’s Quality Management and Product Safety Supervisor, identified the defeat device and talked to Heinz-Jakob Neusser, the head of engine development for the VW Passenger Cars brand (United States District Court, Eastern District of Michigan Southern Division, 2017; U.S. District Court, 2017). After Gottweis and Neusser, had been informed by engineers that the defeat device caused hardware failure, both, Gottweis and Neusser destroyed the letter (United States District Court, Eastern District of Michigan Southern Division, 2017). They then developed another solution with engineers to face the hardware failure (United States District Court, Eastern District of Michigan Southern Division, 2017). Further concerns from engineers were dismissed by Neusser, who instructed to keep on going to get certified by the EPA (United States District Court, Eastern District of Michigan Southern Division, 2017; Castille and Fultz, 2018).

4.4 The Exposure

Later in 2014, the International Council on Clean Transportation exposed that VW cheated on emissions regulations. VW continued refining the defeat device to make it even more difficult to detect. Nevertheless, VW also cooperated and recalled 500.000 vehicles (Castille and Fultz, 2018).

5. Organisational culture in terms of competing values

Organisational culture is dispositive for the existence and functioning of a company. As an “invisible cause variable of the human-system” (Sackmann, 2004, P.27) or a “collective programming of the human mind” (Hofstede, 2001, S.2) organisational culture controls the thinking and action of all employees (Stache and Töpfer, 2008).

5.1 The competing-values-model

One of the most important approaches to characterise organisational culture is the competing-values-model. The idea behind this model is based on value judgements about the priority of all objectives. Depending on strategy and market, companies balance conflicting objectives, which represent competing values (Quinn and Rohrbaugh, 1983). Contrary corporate objectives are clustered in two dimensions, which results in four value-quadrants. The 1st dimension on the x-axis indicates the focus of the company in terms of internal objectives such as solidarity between colleagues and external objectives, such as overall company results. The 2nd dimension on the y-axis indicates a focus on flexibility or control, referring to whether a company prioritises innovation and change or stability and order. The competing-values-model is considered relevant due to its relation to key indicators of corporate success. In 2011, a meta-analysis of 84 empirical studies regarding the competing-values-model and related models of organisational culture showed that competing-values are correlated to

key indicators of success such as employee satisfaction, innovation power and profits (Hartnell, Yi Ou and Knicki, 2011). Moreover, studies showed that competing-values are relevant for quality. A good balance of competition and consensus contributes to highest quality (Töpfer and Duchmann, 2011). In short, consensus leads to cohesion within a group while competition directs a group towards group objectives (Töpfer and Duchmann, 2016).

5.2 VW. An ‘oppressive sweat shop’

Referring to the overall reporting, VW’s organisational culture lacks balance between competing and consensus values since competing values are prevalent. VW’s culture is rather extreme and can be defined as an ‘oppressive sweat shop’ (Quinn, 1988). This form of culture is based on four indicators. Tyrannical goal focus, blind ambition, over-exertion and unproductive conflict (Cameron et al., 2006; Töpfer and Duchmann, 2016).

5.3 Tyrannical goal focus

A tyrannical goal focus is characterised by both anti-subordinate as well as pro-organisational behaviours. Therefore, tyrannical leaders can be goal driven and successful, but they obtain results at the cost of subordinates (Ashforth, 1994). “A tyrannical goal focus can make important issues irrelevant that are not directly related to the dogged pursuit of a goal, such as the work environment, work-life balance, or setting aside resources for creating endeavors” (Cameron et. al., 2006, P. 157). Since tyrannical leaders manipulate, humiliate and intimidate subordinates to get a job done, tyrannical leadership is also viewed as abusive leadership (Einarsen et al., 2007). As abusing is not a legitimate interest of organisations, tyrannical leadership represents a certain type of destructive leadership (Schyns and Hansbrough, 2010). At VW, the tyrannical goal focus is characterised by strong concentration of power within the top-level management. There was an “autocratic, almost dictatorial lead”

(Fahrenholz, 2015, p. 4). Winterkorn was leading with condescension, imperious and merciless (Groll et al., 2015). Decisions had to be executed and were made within small circles (Fasse, Murphy and Schnell, 2015b). The climate was shaped by a “tough tone” and “clear announcements” (Fromm et al. 2015). Overall, it was an “order-obedience-system” (Jakobs, 2015, p. 26) without any culture of discussion (Fasse, Murphy and Schnell, 2015a, P.6) and contradiction was only tolerated in small groups and behind closed doors (Murphy, Fasse and Schnell, 2015). Nevertheless, contradiction was usually expedient and therefore rarely taking place (Fromm et. al., 2015). Winterkorn, controlled the execution of tasks personally (Fahrenholz, 2015) and was deemed a “control freak” (Fasse, Murphy, Schnell, 2015a, P.6). In case of discrepancies, their originators were exposed and howled down (Fromm et. al., 2015; Freitag, 2015; Grolle et al., 2015). Sometimes, they were even humiliated in front of the management team and business partners (Fromm et al., 2015). Moreover, Winterkorn would fire employees that did not meet his expectations. All in all, the emotional state within VW was described as a climate of fear (Murphy, Schnell, 2015a, p.20; From et al., 2015, p.26; Grolle et al., 2015, p.13). Out of the VW engineers nobody dared to speak the truth regarding problematic tasks (Grolle et al. 2015; Töpfer and Duchmann, 2016).

5.4 Blind ambition

Blind ambition “can...drive the organization down dangerous paths, as in ‘become #1 or #2 in your market or else be sold.’ This radical mandate by Jack Welch effectively shut down new product development and ventures into new arenas within General Electric for several years.” (Cameron et. al., 2006, P. 157, 158). Furthermore, blind ambition is characterised by megalomania (Freitag, 2015) and hubris (Fromm, Schäfer and Slavik, 2015).

At VW blind ambition referred to the absolute will to become the world’s largest car manufacturer. Therefore, VW mainly focused on sales figures (Freitag, 2015). Nevertheless,

VW also focused on eco-efficiency to please shareholders and to increase sales. Although, VW's technological capabilities were limited and could not substantially be improved through investments in the short term, VW kept on advertising itself as a green brand. Instead of balancing, VW went for both competing values, sales and performance as well as eco-efficiency. This eventually resulted in pressure and publishing false information due to constraints. Hence, VW's bias towards short-market results, while keeping its sustainable image are another case of blind ambition also known as greenwashing (Li et al., 2018). Moreover, Bosch's warning to VW AG executives such as Martin Winterkorn about the defeat's device illegality and risk can be considered literally blind (United States District Court, Northern District of Illinois, 2016). The same applies to a memo sent to Heinz-Jakob Neusser referring to the same point of criticism around one year later (U.S. District Court, 2017). Moreover, VW intentionally tried to complicate the device's detection after it had been already discovered (Volkswagen's Emissions Cheating Allegations: Initial Questions, 2015).

5.5 Over-exertion

The third indicator for an 'oppressive sweat shop', over-exertion should arise from the previously mentioned incidents and characteristics. Nevertheless, it should be stated again that VW's engineers had to design a completely new engine within two years (Ewing, 2017) but did not manage to find a solution for the emissions problem "within the allocated time frame and budget" (Göhmman Rechtsanwälte, 2016, p. 46). Only the fourth indicator, unproductive conflict cannot be identified since Ferdinand Piëch had already subordinated the management culture to himself (Töpfer and Duchmann, 2016). Subsequent CEOs such as Martin Winterkorn took over this power relation.

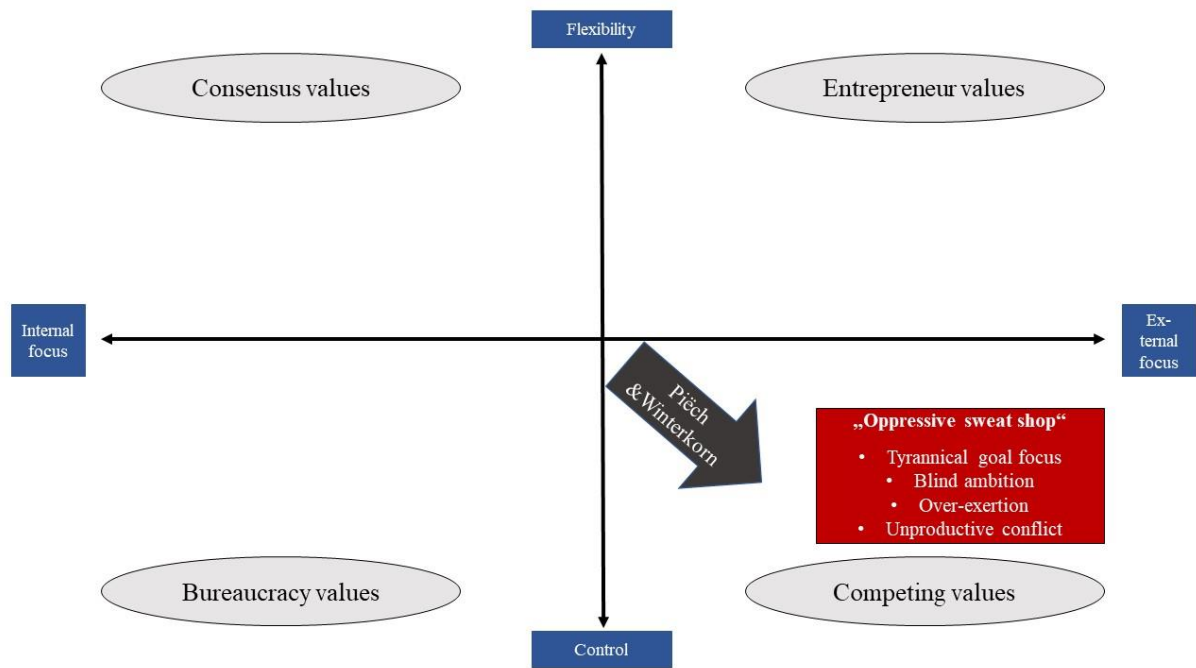


Figure 1: Locating VW's culture within the competing-values model (Töpfer and Duchmann, 2016, p. 402).

6. Piëch's legacy

One may say that Martin Winterkorn established a management culture aligned to himself, but he owned it from Ferdinand Piëch. This assumption is based on an analysis of the organisational researcher Georg Schreyögg, who interpreted 77 reports about Piëch's term from 1987 to 2010 (Bewernick, Schreyögg and Costas, 2013).

As well as Winterkorn's term, Piëch's term was characterised by a climate of fear. Piëch was authoritarian, extremely aware of its own power as well as being autocratic. Moreover, he was obsessed with cars, a control freak and distanced when it came to interpersonal interaction. Schreyögg's analysis described him as an "extremely competitive and record addicted person, ...who gives the achievement of self-defined goals highest priority...as if he would like to decide upon everything on his own, while being resistant to any kind of criticism." (Bewernick, Schreyögg and Costas, 2013, p.452). Top Manager Bob Lutz, who worked for GM, Chrysler and Ford, hold Piëch responsible for the emissions scandal, referring to a quote about perfect gap sizes in VW cars: "Piëch had told him how he managed to reach that: He had sent for all

persons responsible and explained them, that he was fed-up with all the ridiculously wide gaps between the panels. Therefore, his employees were given six weeks to bring the gap sizes to world class level – otherwise he would have replaced them all. This threat worked” (Dudenhöffer, 2016, p. 191). Lutz called this leadership style a reign of terror, short-term oriented and extremely risky (Dudenhöffer, 2016. P.191). Therefore, the two characteristics of the ‘oppressive sweat shop’, tyrannical goal focus in addition to blind ambition are also inherent to Ferdinand Piëch.

In summary, VW’s focus on competing values was detrimental due to its imbalance with consensus values. Despite its competitive character VW never experienced any major conflicts since Piëch and Winterkorn did not only subordinate the organisational culture to themselves but also dismissed all potential opponents. This also means, that both established a biased technological culture, that prevented mutual exchange of ideas and justified criticism between engineers and business economists, which will be referred to in the following chapter. The only real competition against Toyota was external. Employees were considered instruments on the road to becoming the largest car manufacturer in the world (Töpfer and Duchmann, 2016).

7. Cultural clash: Engineers vs. business economists

Due to Piëch and Winterkorn, mainly engineers managed to get top positions at VW. Winterkorn even stated, that his successor could only be a “car guy” (Schneider, 2010, p.22). Nevertheless, a so called “gas-in-blood-culture” is seen as causal for the emissions scandal (Jakobs, 2015, p. 26). Moreover, a potential for conflicts between engineering and business values has been inherent to VW. Edgar H. Schein Professor ‘emeritus’ of the MIT identified the general presence of three different cultures within companies, while two of them usually produce conflicts (Schein, 1996). Members of the technological culture aim to decrease the human influence and easily get frustrated if costs prevent them from implementing

technological solutions. On the contrary, the leading culture aims to implement a solution that is ‘good enough’.

At VW, the technological culture succeeded and became a leading culture as well. The result was a culture of technological perfectionism. Therefore, financials were less important, which resulted in cost problems at VW. The car manufacturer had a 25% productivity gap compared to Toyota (Freitag, 2015). Two examples evidenced this imbalance. Wolfgang Bernhard, who is the CEO of Daimler Trucks nowadays, had to leave VW due to Winterkorn. Bernhard had dared to criticise VW’s cost structure as well as “technical gimmicks and hobbies” (Preuss and Ritter, 2009, p.16). On the other hand, Axel Mees former head for North America, had chosen the wrong words as well. “The head of the company was an engineer...and he aimed to prove that he can build amazing cars. Nevertheless, he did not take the marketing and brand aspects into consideration” (Freitag, 2015, p. 18). Mees, was fired nine days after (Töpfer and Duchmann, 2016). Although financials were not important on a company-wide level, performance-based remuneration on an individual level was considered important and was happily taken despite cost problems. This remuneration reinforced the technological culture since it worked as an incentive to work towards the leading culture.

8. Performance-based cheating

Besides technological leadership another factor shaped ethical conduct within VW. Several studies show that a relation of remuneration and performance contributes to scandals. Moreover, performance-based pay is rather short-term focused which leads to downsides in the long run (Cable and Vermeulen, 2016). Bonuses and stock options especially contribute to short term orientation of managers and encourage riskier behaviour, high reward levels even lower performance and creativity (Ariely et al. 2009). Therefore, variable pay is rather detrimental in volatile businesses (Cable and Vermeulen, 2016). Since environmental research is usually long-

term oriented, variable pay negatively affects its outcome.

VW's bonus system is not only generous but also covers the whole workforce. The number of bonuses is related to the career ladder. Winterkorn earned €16m in 2014 of which only €2m and therefore 12,5% was fixed pay (Armour, 2016). This relation was similar for the management board. Variable pay of executives was not linked to the share price but to satisfaction, operating profits, customer satisfaction, sales growth and employee productivity. Thus, it was consistent with the overall goal of becoming the world's largest car manufacturer. Even the supervisory board profited from a similar salary structure. Piëch earned €1.5m in 2014 of which only €200.000 and therefore 13% were fixed (Armour, 2016). Furthermore, parts are tied to people around each employee. This works like an incentive to avoid criticism. Hence, VW's deception is also related to remuneration system since people think twice before they speak up. Moreover, variable pay makes employees balance own financial goals with company needs. This leads to unethical decisions. "Extrinsic motivation causes people to distort the truth regarding goal attainment" (Cable and Vermeulen, 2016). Performance-based pay also contributes to earnings manipulations, safety issues and lawsuits (Peng and Roell, 2008; Harris and Bromiley, 2007). In particular, CEOs on option based pay produce safety issues more often (Wowak et al., 2015; Li et al., 2018).

Deception at VW lasted for around ten years and nobody really questioned the unethical conduct that was happening. This leads to the conclusion that everyone involved, including managers, were influenced through remuneration benefits and suffered from a lock-in-effect, which will be illustrated in the next chapter. Thus, they remained silent and continuously engaged in collaborative cheating (Georgi, D., and Handwich, K., 2010; Li et al., 2018).

9. Collaborative Cheating

As mentioned, the emissions scandal was not the result of a few engineers and related to all hierarchy levels within VW. It was the outcome of collaboration, which leads to the question how people become involved in collaborative unethical conduct.

Literature almost does not refer to collaborative cheating. Therefore, based on the given data, this paper assumes that pressure and bullying can contribute to collaborative cheating. Especially pressure and the impact of authority are well documented. Both contribute to selfish behaviour which makes employees go for solutions that will be appreciated by their superiors (Milgram, 1974; Janis, 1972; Kuyumcu and Dahling, 2014). Nevertheless, literature does not establish a connection between organisational aspects and collective unethical conduct such as collaborative cheating. This paper assumes that a climate of fear caused by leaders can lead to unethical behaviour and to collaborative cheating in particular (Bandura, 1999). Employees were not actually cheating for VW but for themselves which goes hand in hand with the remuneration aspect. Moreover, literature states that destructive and abusive leadership infects all hierarchy levels (Liu, Liao and Loi, 2012). It is assumed that such leaders foster a collective bottom line mentality which results in collaboration and finally in unethical solutions (Castille and Fultz, 2018)

Hence, collaborative cheating in case of VW is the consequence of organisational leadership issuing threats to subordinates due to performance concerns. Job security threats, as well as an increasing number of collaborators, contributed to a bottom line mentality, climate of fear or just to an 'oppressive sweat shop culture' (Ashkanasy and Nicholson, 2003). This mentality aligned employees' self-interest, which became more short-term oriented. As a result, collaborative cheating efforts emerged, more and more people became aware of or involved in. Thus, the costliness of not contributing or failing increased due to job security issues and pressure (Granovetter, 1978). Moreover, a so-called lock-in effect prevented them from

behavioural change, since the immediate switching costs of modifications towards ethical conduct and exposure, exceeded the immediate benefit, which resulted in an overall compounding systemic effect (Georgi, D., and Handwich, K., 2010). Therefore, employees started to support cheating efforts due to moral disengagement and rationalisation. This means that employees weighed benefits and costs and eventually went for the benefits. On the other hand, an increasing number of employees involved went hand in hand with an increase in non-conformance as well as in expertise which contributed to the likeliness of continuation on a technical point of view (Granovetter, 1978). Moreover, employees involved had already violated their values which decreased the likeliness of becoming uninvolved. Hence, a so-called point of no return had been reached, and the organisation's use of deceptive tactics rose. This resulted in an increased risk of detection and contributed to organisational decline (Castille and Fultz, 2018).

10. Causal chain and conclusions

In summary, the search for traces explaining how and why the VW Emissions Scandal developed starts with Ferdinand Piëch, who established VW's management culture based on his authoritarian and autocratic leadership style. This culture was subsequently adopted by Martin Winterkorn and characterised by an overweight of competing values in general as well as a tyrannical goal focus, blind ambition and over-exertion. The tyrannical leadership that had been introduced by Piëch and continued by Winterkorn did not only result in over-exertion of VW's employees but created an 'oppressive sweat shop' culture characterised by a bottom-line mentality and a climate of fear, which prevented disagreement on a vertical hierarchical level at VW. Therefore, the top-level management lacked relevant feedback from its engineers trying to find a solution for the emission problem. Moreover, VW's technological culture, which had been promoted by Piëch and Winterkorn focused rather on technological perfectionism than on

financials, which resulted in cost problems and finally in external pressure due to more cost-efficient competitors. Additionally, internal pressure based on VW's 'oppressive sweat shop culture' affected VW's employees. Wrong strategic goals of Martin Winterkorn created unsolvable problems in terms of environmental standards, technological capabilities, time and money, which put VW's engineers in an almost desperate situation.

If these were not already enough incentives for unethical conduct, VW had also established performance-based pay within all hierarchical levels. Consequently, employees did not only act short-term oriented but aimed to gain benefits for themselves instead of taking care about VW's long-term success. Since parts of their bonuses were tied to their direct colleagues criticism was subdued on a horizontal hierarchical level as well. Therefore, VW did not only lack critical feedback in between different departments but also within the same management levels. Within this environment a few employees initially started to cheat to be able to fulfil the targets despite the given constraints. Nevertheless, they did not cheat for VW but for themselves as a consequence of job security threats and remuneration. Issues with the defeat device and its concealment that arose during the cheating process required the expertise and authorisation of more employees. This increased the costliness of not contributing for employees that were not involved as well as the consequences of failing for employees who were implicit, as they started to become responsible not only for themselves but also for their colleagues in the case of exposure. Moreover, employees involved had already violated their values, while every other employee involved increased the expertise within the collaborative cheating process. Accordingly, the probability of continuation increased as well, since the cheating process turned out to be a compounding systemic effect. Finally, the risk of detection was considered low since engine control units are complex and the relevant software code was considered hard to find. Additionally, wrong legal assumptions and unawareness of strict punishment due to previous, relatively low fines led to a feeling of relative security. These assumptions had not only caused

cheating at VW but also led to its exposure in the end. After a continuous growth over years, VW also managed to become the world's largest car manufacturer in the first half of 2015 (NTV, 2015). This most likely felt like a well-deserved reward for employees and managers and concealed present problems.

As leadership at VW consequently promoted unethical conduct and several leaders denied and still deny a violation of laws and ethics only a change in terms of leadership and culture, which will be referred to hereinafter, can contribute to an overall change and prevent future cheating at VW from taking place (Castille and Fultz, 2018).

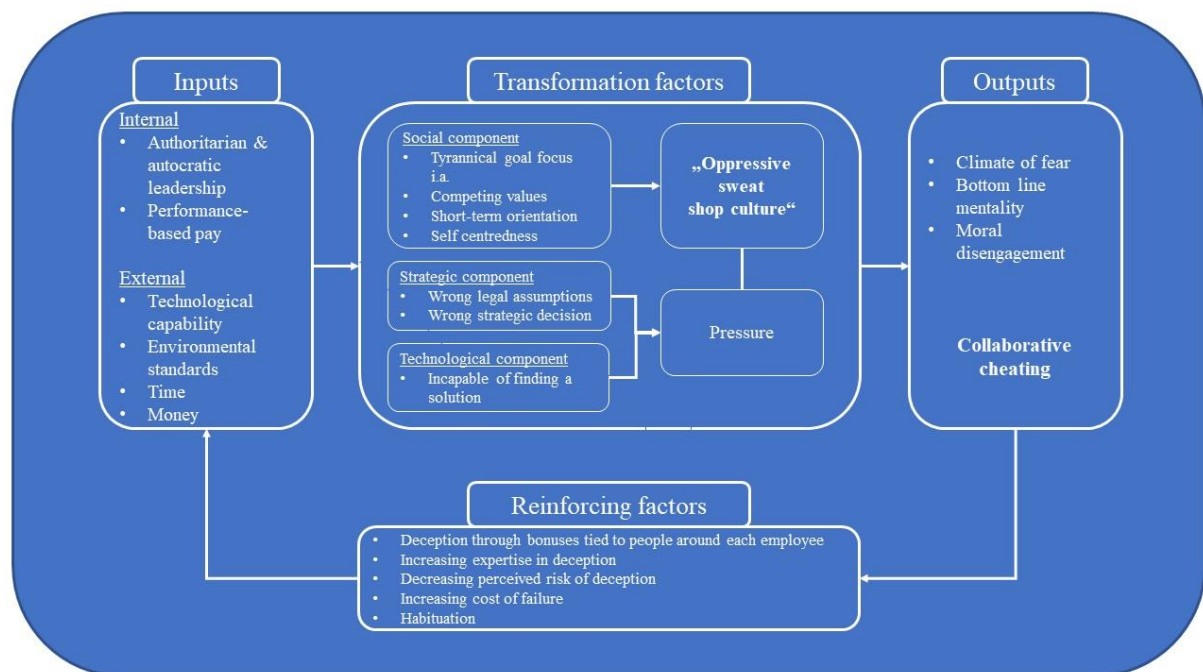


Figure 2: Application of the open-systems approach to the VW Emissions Scandal.

11. Implications for leadership

The most important lesson of the VW Emissions Scandal is to keep an eye out to outcomes of corporate culture (Howard, 2017). Matthias Müller former CEO of VW and successor of Martin Winterkorn highlighted the importance of consensus values after his inauguration and started to implement a cooperative culture based on team spirit and decentralised decision-making (Murphy, Fasse and Schnell 2015; Slavik 2015). To counter

further one-man shows, he encouraged managers to participate more. All this happened in the light of the creation of a transparent culture with an open handling of mistakes. Nevertheless, this was a “real cultural break” according to the German newspaper Handelsblatt (Murphy, Fasse and Schnell 2015, p. 19). This is a logical conclusion as consensus and competing values are detrimental. Therefore, a change in values entails the risk of adaption problems. Especially, the delegation of power to lower decision-making levels, can even cause resistance, since some employees neither like to make decisions nor like responsibility. Hence, they rather prefer to ask their management about tasks, which decreases the risk of culpability.

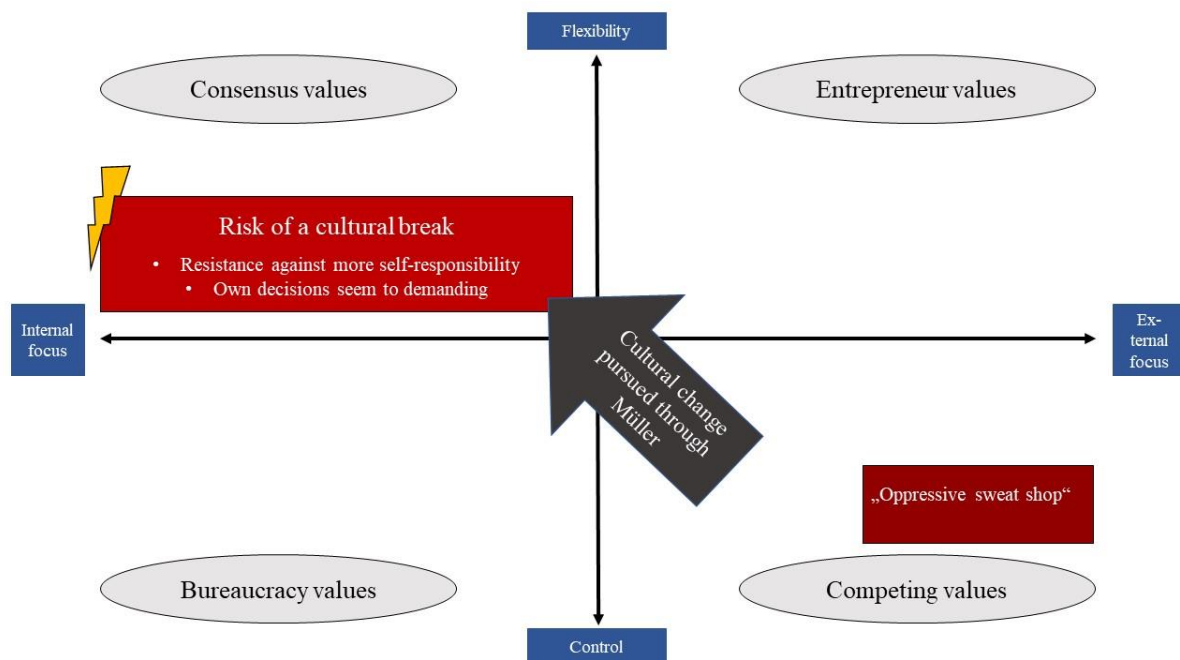


Figure 3: Risks of cultural change within VW (Töpfer and Duchmann, 2016, p. 405).

Consequently, cultural changes are fraught with risk. Besides a cultural change ethical leadership should be implemented. Thus, moral managers would reward ethical conduct and sanction otherwise (Bonner et al., 2016). Moreover, ethical incentives can support ethical leadership and promote ethical conduct (Trevino et al., 1999, 2000). Nevertheless, an environment of fear and a bottom line mentality as well as a lack of potential sanctions could encourage employees to gain ethical incentives unethically (Wenzel, 2004). Accordingly, a

cooperative culture and a well-developed system of clear sanctions and incentives must be established first. Finally, a creative leeway for certain ethics-related fields such as environmental friendliness can potentially encourage ethical conduct (Paulraj, 2011; Blome, Foerstl and Schleper, 2017).

Matthias Müller was dismissed on the 30th of April 2018 (Töpfer and Duchmann, 2016). Therefore, it must be questioned whether a cultural change at VW is truly wanted.

12. Limitations and future research

Although the given work was conducted scientifically, issues regarding subjectivity due to the qualitative research method as well as due to the character of data involved must be considered. Since a relevant amount of data is based on people's perceptions, the likeliness of perjury in the case of legally relevant facts must not be neglected. Moreover, new data might question the given findings. Therefore, this work is considered preliminary and not generalisable since research was conducted in relation to just one company with a certain culture and within a certain industry. Consequently, future research shall be conducted on other cases to develop an overall applicable model as well as to test the findings in terms of validity (Castille and Fultz, 2018). In addition, the development of a uniform concept of dark leadership is needed not only to facilitate future research but also to make research more comparable. Furthermore, it should be explored how leadership theory can affect the work of crisis management teams in dealing with prevalent problems. Therefore, research needs to be carried out within companies (Fischbacher-Smith, 2016). This will unfortunately stay a future challenge. Finally, the impact of regulation and governance on leadership deserves dedication as well to prevent future scandals from happening.

"I start with the premise that the function of leadership is to produce more leaders, not more followers." Ralph Nader

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Annexe

VW's legacy

VW's history regarding defeat devices goes back to 1973, when VW was fined by the Environmental Protection Agency 'EPA' in the U.S for deploying a defeat device with \$120.000 (United States of America v. Volkswagen of America, 2005). Audi a member of the Volkswagen Group created another device, a software that recognised simulated driving cycles in 1999 (Bosch, 2006). It was installed in Diesel engines from 2004-2008. From 2002 to 2006 Martin Winterkorn had been the CEO of Audi until he joined VW. Six years later VW failed to inform the EPA about emissions problems, which resulted in a \$1.1m fine (Ewing, 2017).

The factor Winterkorn

Additionally, it must be stated that Winterkorn's character was not the result of a personal development during his time at VW. In 2006, Winterkorn has been described as a "choleric person" with "violent fits of rage" already (Theurer, 2006, p. 16). He was considered a "cold distant figure...known for obsessive attention for detail" (Levin, 2015), examined cars right from the product line and roasted employees if considered necessary. An industry analyst stated: "He does not like bad news. Before anyone reports to him, they make sure they have good news." (Muller, 2013; Lynch, Cutro and Bird, 2017). Especially, the so-called 'Tuesday meeting', a get together of all managers, was feared due to Winterkorn's harsh criticism (Ewing, 2017). Therefore, "the worst problems were not shown to the 'Rowdy Winterkorn' to some extent" (Töpfer and Duchmann, 2016, p.402). Nevertheless, Winterkorn basically just continued what had started with his mentor in the 90s already.

Implications in terms of Corporate Governance

Companies' operational decisions are influenced by corporate governance and business ethicality, which play an important role in terms of ethical conduct. In December 2015, VW's chairman Hans-Dieter Pötsch stated that "a group of the company's engineers decided to cheat on emissions tests in 2005 because they could not find a technical solution within the company's "time frame and budget" to build diesel engines that would U.S emissions standards" (Goodman, 2015). Even later, when engineers at VW had found alternatives "they chose to keep on cheating, rather than employ it" (Goodman, 2015; Liu, Liao and Loi, 2012). Regarding the inability of finding a technical solution one may think that VW must have invested more heavily in technological progress and research. Nevertheless, its employees still decided to go ahead with their initial approach. Hence, not only technological progress and research are crucial to make goals achievable but also responsibility, accountability and transparency in terms of corporate governance as well as business ethics (Liu, Liao and Loi, 2012).

In case of VW it needs to be distinguished between externalities and agency costs in terms of corporate governance. Just because a company's structure is designed to minimise the agency costs between employees and shareholders through codetermination it is not less problematic in case of externalities. If a company grows, both sides profit. Thus, effective personal liability is needed in terms of deliberate misconduct and irresponsible risk management. Although, the former is already in place in jurisdictions, the latter still needs to be strengthened. Therefore, the personal liability of managers must be high when the probability of detection of misconduct is low to counteract performance-based pay. Moreover, such liability must not be insurable since decisions towards illegal actions are not business decisions. Nevertheless, the corporate law is not going far enough, and insurance is still routine. Although there is liability in terms of negligence in Germany, the chances for a lawsuit are low. Moreover, in all of Europe barriers for derivative actions are too high to be an efficient deterrent. Therefore, it is unlikely to litigate.

Other than that, the public enforcement of director's duties could be improved. In Australia the Australian Securities and Investments Commission can enforce director's private law duties. Finally, the VW Emissions Scandal is also interesting in terms of risk management, which refers to the question how a relatively small number of employees could affect 11m vehicles. In case of VW, the engine control unit consists of 100m lines of code, which is more than all 60m line of Facebook (Armour, 2016). Hence, the more software becomes relevant the more risk management must focus on employees designing and authorising software. Accordingly, oversight, selection, compensation and training of the software development and programmers must be central to the risk management (Armour, 2016).

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